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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/597,437	06/20/2000	Michael J. Piatt	SDP259PA	6119

7590 12/04/2003

Barbara Joan Haushalter
228 Bent Pines Court
Bellefontaine, OH 43311

EXAMINER

LEE, TOMMY D

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 12/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/597,437

Applicant(s)

PIATT ET AL.

Examiner

Thomas D. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3 and 4 is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 5 is/are rejected.
- 7) ☒ Claim(s) 6-8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,031,559 (Ng).

Regarding claims 1 and 2, Ng teaches a method for processing continuous tone image data for imaging on a digital output device, the method comprising the steps of: identifying problematic tone levels in the binary representation of an image (gray levels 11 and 31 not deemed “reasonably accurate” and thus represent problematic tone levels (column 5, lines 41-48; also note Fig. 4)); generating predetermined continuous tone levels based on the identified problematic tone levels (column 5, lines 49-54); and applying data transformation to the corresponding predetermined continuous tone levels to purposefully avoid or correct the identified problematic tone levels in a binary representation of the image (column 5, line 54 – column 6, line 13). Several adjacent levels in the predetermined continuous tone levels are assigned a same specific tone that corresponds with a binary representation that avoids undesirable artifacts (noting Fig. 6, two possible selections for replacing the problematic gray level of 11 are gray

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levels 10 (exposure time = 10 and exposure intensity = 1) and 12 (exposure time = 4 and exposure setting = 3), and thus gray levels 10 and 11 may be assigned an output gray level of 10, or gray levels 11 and 12 may be assigned a gray level of 12).

Regarding claim 5, Ng teaches a method for processing continuous tone image data for imaging on a digital output image, the method comprising the step of: identifying at least one problematic tone level in the binary representation of the image (gray levels 11 and 31 not deemed "reasonably accurate" and thus represent problematic tone levels (column 5, lines 41-48; also note Fig. 4)); identifying at least one non-problematic tone level in the binary representation of the image (substitute gray levels for the problematic gray level 11 shown in Fig. 6); applying data transformation to cause the digital output device to replace the at least one problematic tone level in the binary representation of the image with output at the at least one non-problematic tone level in the binary representation of the image (column 5, line 54 – column 6, line 13).

Allowable Subject Matter

3. Claims 3 and 4 are allowed.
4. Claims 6-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. The following is a statement of reasons for the indication of allowable subject matter: No prior art has been found to teach or suggest generation of predetermined continuous tone levels based on identified advantageous tone levels and applying data transformation to the predetermined continuous tone data levels to purposefully select

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identified advantageous binary tone levels for enhancing a binary representation of the image data, as recited in base claim 3; or generation of predetermined continuous tone levels based on both the at least one identified problematic tone level and the at least one identified non-problematic tone level, as recited in dependent claim 6.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas D. Lee whose telephone number is (703) 305-4870. The examiner can normally be reached on Monday-Friday (7:30-5:00), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (703) 308-7452. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



Thomas D. Lee
Primary Examiner
Art Unit 2624

tdl
December 1, 2003